

ADDRESSING CLIMATE CHANGE IN INDONESIA



DECEMBER 2007



Photo: Ruth Hall

Indonesian forests are being cut at an estimated rate of 2-3 football fields per minute. These logs were illegally cut from Central Kalimantan forests

THE CHALLENGE

Indonesia emits large amounts of greenhouse gases, which are a root cause of climate change

Deforestation is Indonesia's largest source of emissions, amounting to five times its emissions from non-forestry sources

THE GOAL

Collaboration to strengthen policies, apply sustainable forest management practices, and reduce energy emissions

OVERVIEW

Indonesia is particularly vulnerable to the effects of climate change, which include rising sea levels and erosion of coastal areas, increased frequency and intensity of extreme weather events, species extinction, and the spread of vector-borne diseases. At the same time, Indonesia faces challenges in addressing the causes of climate change. Currently, Indonesia is the third largest contributor of greenhouse gas emissions, behind the U.S. and China.

Deforestation is by far the largest contributor to greenhouse gas emissions in Indonesia. Indonesia's forests rank among the largest in the world, but the rate of their loss is the world's highest. Emissions resulting from deforestation and forest fires account for five times the emissions from non-forestry sources. In contrast, on a global scale, deforestation accounts for some 20% of the world's carbon emissions.

The U.S. Government is supporting several programs and activities that help Indonesia mitigate climate change while fostering key development priorities. These initiatives can be broadly categorized into those that stop further deforestation and thereby prevent the release of sequestered carbon, and those that reduce energy-related carbon emissions.

SUSTAINABLE FOREST AND BIODIVERSITY MANAGEMENT

Through the *Aceh Technical Assistance Recovery Project* (ATARP) program, USAID facilitated discussions between provincial governments and the World Bank, culminating in the governors of Aceh, Papua and Papua Barat provinces declaring logging moratoriums. The three governors embraced carbon sequestration as a means of slowing climate change and pledged engagement on the global carbon trading system, to bring economic benefits to local areas in exchange for dedicating large forest areas as carbon sinks. Papua and Papua Barat provinces committed to reallocating up to 5 million hectares of forests for carbon trading; these forests were originally slated for conversion to palm oil plantations and other carbon-producing uses.

The USAID-funded *Orangutan Conservation Services Program* (OCSP) helps Indonesia preserve some of the world's most highly valued biodiversity: orangutan forest habitat on Kalimantan (Borneo) and Sumatra islands. Loss of habitat through unsustainable and illegal logging, forest conversion and fires, represents the biggest threat to orangutan and the largest source of carbon emissions. OCSP's goal is to reduce the rate of forest loss by working closely with the Government of Indonesia, the private sector and non-governmental organizations to address key threats. OCSP supports and helps operationalize Indonesia's national Strategy and Action Plan for Orangutan Conservation both in specific sites, and in the broader enabling context. Indonesia's forests and orangutan habitat sequester enormous amounts of carbon. Policies and institutional mechanisms that prevent the release of that carbon, avoid deforestation emission reduction and hold significant potential for Indonesia to realize economic benefits from sustainable management of its forests.

The USAID-funded *Environmental Services Program* (ESP) has field activities that improve understanding of the role that forests can play in mitigating climate change. Over its five year term, ESP will bring improved local management to 82,000 hectares of high conservation value forests and facilitate the rehabilitation of 35,000 hectares of degraded forests in important watershed areas.



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Photo: NASA

Fire is used on a massive scale in Indonesia as a low cost means of land clearing. This satellite image shows smoke plumes from seasonal fires on Sumatra and Borneo. Red dots indicate individual fires.

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The State Department and the U.S. Trade Representative have negotiated with the Indonesian Ministries of Trade and Forestry the U.S. Government's first *Memorandum of Understanding on Combating Illegal Logging and Associated Trade*. Presidents George W. Bush and Susilo Bambang Yudhoyono announced the MOU during the U.S. President's November, 2006 visit to Indonesia. Implementation of the MOU includes collaboration on sustainable forest management, improved law enforcement, and improved markets for legally harvested timber products. This effort will strengthen the enabling conditions for avoiding deforestation, specifically addressing the trade issues that are involved.

The State Department contributed to a *Heart of Borneo* conservation initiative spearheaded by World Wildlife Fund (WWF). This program works to conserve a high biodiversity, trans-boundary area that includes parts of Indonesia, Malaysia and Brunei. In conjunction with the *Heart of Borneo* initiative, the 2008 International Visitor's Leadership Program has provided special funding for a group of professionals from Indonesia, Malaysia and Brunei to discuss key environmental management issues with U.S. counterparts.

The Governments of Indonesia and the U.S. are currently discussing the *Tropical Forest Conservation Act* (TFCA) program. Under the program, a portion of the Government of Indonesia's debt to the U.S. government may be reduced and redirected toward tropical forest conservation in Indonesia.

REDUCING ENERGY EMISSIONS

The USAID-supported AMARTA program is developing a pilot project for small-scale production of bio-fuel from *Jatropha curcas* (castor oil trees) in Flores, Nusa Tenggara Timur. AMARTA is providing a local producers cooperative with equipment to press *Jatropha* seed, producing a kerosene substitute and other valuable compounds. AMARTA is also providing approximately 140,000 *Jatropha* seedlings; assistance in establishing a nursery; and secondary equipment with which to produce bio-diesel fuel suitable for small engines. This is a promising demonstration project for two reasons. First, *Jatropha* thrives in dry, marginal soils and might serve as an alternative to palm oil, which often leads to the clearing of high-carbon, high biodiversity value forests for the creation of new plantations. Second, bio-fuel produced with *Jatropha* oil emits 78% less greenhouse gases than conventional diesel fuel.

ASSISTING INTERDICTION IN ILLEGAL LOGGING

The Indonesia Criminal Investigative Division and Marine Police will soon have a new tool in its war against Indonesia's illegal logging industry. The USG, led by the Department of Justice's (DOJ) International Criminal Investigative Training Assistance Program (ICITAP) Indonesia, will be providing forensic kits and backpacks to be used by investigators in collecting forensic evidence for illegal logging cases. ICITAP will also train and provide technical assistance to the Indonesian National Police in illegal logging interdiction and investigative strategies. ICITAP Indonesia, with funding under the illegal logging MoU, will train sections of the Criminal Investigative Division, the Marine Police and other law enforcement units responsible for protecting critical habitat areas and forests – such as Batam-Riau, Kalimantan, the Indonesian part of Borneo. Under the illegal logging MoU, the U.S. Forest Service and Customs and Border Protection are training Indonesian customs agents and police, while the Office of the U.S. Trade Representative is providing Indonesia with U.S. import data to help identify illegal exports of timber products from Indonesia. ICITAP will also work with US DOJ's Office of Overseas Prosecutorial Development, Assistance and Training to train and educate prosecutors from the regional Indonesia Attorney General's Office on building effective prosecution strategies for illegal logging cases.



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